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Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2008; month=1; day=28; hr=10; min=8; sec=36; ms=151; ]

\_\_\_\_\_\_

## Validated By CRFValidator v 1.0.3

Application No: 10584831 Version No: 1.0

Input Set:

Output Set:

**Started:** 2008-01-25 16:31:42.958

Finished: 2008-01-25 16:31:48.599

Elapsed: 0 hr(s) 0 min(s) 5 sec(s) 641 ms

Total Warnings: 384

Total Errors: 0

No. of SeqIDs Defined: 384

Actual SeqID Count: 384

Error code		Error Description									
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W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(14)
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W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(18)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(19)
W	213	Artificial	or	Unknown	found	in	<213>	in	SEQ	ID	(20)

### Input Set:

## Output Set:

**Started:** 2008-01-25 16:31:42.958

**Finished:** 2008-01-25 16:31:48.599

**Elapsed:** 0 hr(s) 0 min(s) 5 sec(s) 641 ms

Total Warnings: 384

Total Errors: 0

No. of SeqIDs Defined: 384

Actual SeqID Count: 384

# Error code Error Description

This error has occured more than 20 times, will not be displayed

 $\mathbb{W}$  402 Undefined organism found in <213> in SEQ ID (382)

 $\mathbb{W}$  402 Undefined organism found in <213> in SEQ ID (383)

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      Garman, Jonathan David
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<140> 10584831
<141> 2008-01-25
<150> US 60/532,169
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Gly Met Gly Leu Ser Ile Val Ala Ala Lys Gly Ala Gly Gln Asp Lys
  20 25 30
Leu Gly Ile Tyr Val Lys Ser Val Val Lys Gly Gly Ala Ala Asp Val
 35 40
                                45
Asp Gly Arg Leu Ala Ala Gly Asp Gln Leu Leu Ser Val Asp Gly Arg
  50 55 60
Ser Leu Val Gly Leu Ser Gln Glu Arg Ala Ala Glu Leu Met Thr Arg
65 70 75 80
Thr Ser Ser Val Val Thr Leu Glu Val Ala Lys Gln Gly
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1 5 10 15
Gly Lys Gly Leu Gly Phe Ser Ile Ala Gly Gly Arg Asp Cys Ile Arg
               25
       20
                                30
Gly Gln Met Gly Ile Phe Val Lys Thr Ile Phe Pro Asn Gly Ser Ala
35 40 45
Ala Glu Asp Gly Arg Leu Lys Glu Gly Asp Glu Ile Leu Asp Val Asn
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Gly Ile Pro Ile Lys Gly Leu Thr Phe Gln Glu Ala Ile His Thr Phe 65 70 75 80 Lys Gln Ile Arg Ser Gly Leu Phe Val Leu Thr Val Arg Thr Lys Leu Val Ser Pro Ser Leu Thr Asn Ser Ser 100 105 <210> 5 <211> 105 <212> PRT <213> Artificial Sequence <220> <223> Synthetic peptide <400> 5 Gln Ser Glu Asn Glu Glu Asp Val Cys Phe Ile Val Leu Asn Arg Lys 1 5 10 Glu Gly Ser Gly Leu Gly Phe Ser Val Ala Gly Gly Thr Asp Val Glu 20 25 30 Pro Lys Ser Ile Thr Val His Arg Val Phe Ser Gln Gly Ala Ala Ser 45 35 40 Gln Glu Gly Thr Met Asn Arg Gly Asp Phe Leu Leu Ser Val Asn Gly 50 55 60 Ala Ser Leu Ala Gly Leu Ala His Gly Asn Val Leu Lys Val Leu His 65 70 75 80 Gln Ala Gln Leu His Lys Asp Ala Leu Val Val Ile Lys Lys Gly Met Asp Gln Pro Arg Pro Ser Asn Ser Ser 100 105 <210> 6 <211> 132

<220> <223> Synthetic peptide

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<212> PRT

Gly Ile Ser Ser Leu Gly Arg Lys Thr Pro Gly Pro Lys Asp Arg Ile
1 5 10 15

Val Met Glu Val Thr Leu Asn Lys Glu Pro Arg Val Gly Leu Gly Ile 20 25 30

Gly Ala Cys Cys Leu Ala Leu Glu Asn Ser Pro Pro Gly Ile Tyr Ile 35 40 45

His Ser Leu Ala Pro Gly Ser Val Ala Lys Met Glu Ser Asn Leu Ser 50 55 60

Arg Gly Asp Gln Ile Leu Glu Val Asn Ser Val Asn Val Arg His Ala 65 70 75 80

Ala Leu Ser Lys Val His Ala Ile Leu Ser Lys Cys Pro Pro Gly Pro 85 90 95

Val Arg Leu Val Ile Gly Arg His Pro Asn Pro Lys Val Ser Glu Gln \$100\$ \$105\$ \$110\$

Glu Met Asp Glu Val Ile Ala Arg Ser Thr Tyr Gln Glu Ser Lys Glu 115 120 125

Ala Asn Ser Ser 130

<210> 7

<211> 101

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 7

Leu Gly Arg Ser Val Ala Val His Asp Ala Leu Cys Val Glu Val Leu 1 5 10 15

Lys Thr Ser Ala Gly Leu Gly Leu Ser Leu Asp Gly Gly Lys Ser Ser 20 25 30

Val Thr Gly Asp Gly Pro Leu Val Ile Lys Arg Val Tyr Lys Gly Gly 35 40 45 Ala Ala Glu Gln Ala Gly Ile Ile Glu Ala Gly Asp Glu Ile Leu Ala 55 60 50 Ile Asn Gly Lys Pro Leu Val Gly Leu Met His Phe Asp Ala Trp Asn 70 75 80 Ile Met Lys Ser Val Pro Glu Gly Pro Val Gln Leu Leu Ile Arg Lys 90 His Arg Asn Ser Ser 100 <210> 8 <211> 98 <212> PRT <213> Artificial Sequence <220> <223> Synthetic peptide <400> 8 Arg Glu Glu Gly Met Pro Gln Thr Val Ile Leu Pro Gly Pro Ala 5 10 Pro Trp Gly Phe Arg Leu Ser Gly Gly Ile Asp Phe Asn Gln Pro Leu 20 25 30 Val Ile Thr Arg Ile Thr Pro Gly Ser Lys Ala Ala Ala Asn Leu 35 40 45 Cys Pro Gly Asp Val Ile Leu Ala Ile Asp Gly Phe Gly Thr Glu Ser 50 55 60 Met Thr His Ala Asp Ala Gln Asp Arg Ile Lys Ala Ala Ala His Gln 70 75 65 Leu Cys Leu Lys Ile Asp Arg Gly Glu Thr His Leu Trp Ser Pro Asn 85 90

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Leu Lys Gly Gly Arg Glu His Gly Glu Pro Leu Val Ile Thr Lys Ile
       20
                25 30
Glu Glu Gly Ser Lys Ala Ala Ala Val Asp Lys Leu Leu Ala Gly Asp
     35 40 45
Glu Ile Val Gly Ile Asn Asp Ile Gly Leu Ser Gly Phe Arg Gln Glu
 50 55 60
Ala Ile Cys Leu Val Lys Gly Ser His Lys Thr Leu Lys Leu Val Val
         70
                       75
Lys Arg Asn Ser Ser
       85
<210> 10
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Ser Val Gly His Val Arg Gly Pro Gly Pro Ser Val Gln His Thr Thr
1 5
                      10
Leu Asn Gly Asp Ser Leu Thr Ser Gln Leu Thr Leu Leu Gly Gly Asn
Ala Arg Gly Ser Phe Val His Ser Val Lys Pro Gly Ser Leu Ala Glu
```

40

45

35

Lys Ala Gly Leu Arg Glu Gly His Gln Leu Leu Leu Glu Gly Cys 50 55 60 Ile Arg Gly Glu Arg Gln Ser Val Pro Leu Asp Thr Cys Thr Lys Glu 65 70 75 80 Glu Ala His Trp Thr Ile Gln Arg Cys Ser Gly Pro Val Thr Leu His 90 95 Tyr Lys Val Asn His Glu Gly Tyr Arg Lys 100 <210> 11 <211> 105 <212> PRT <213> Artificial Sequence <220> <223> Synthetic peptide <400> 11 Arg Arg Pro Ala Arg Arg Ile Leu Ser Gln Val Thr Met Leu Ala Phe 1 5 10 15 Gln Gly Asp Ala Leu Leu Glu Gln Ile Ser Val Ile Gly Gly Asn Leu 20 25 30 Thr Gly Ile Phe Ile His Arg Val Thr Pro Gly Ser Ala Ala Asp Gln 35 40 45 Met Ala Leu Arg Pro Gly Thr Gln Ile Val Met Val Asp Tyr Glu Ala 50 55 60 Ser Glu Pro Leu Phe Lys Ala Val Leu Glu Asp Thr Thr Leu Glu Glu 65 70 75 80 Ala Val Gly Leu Leu Arg Arg Val Asp Gly Phe Cys Cys Leu Ser Val 90 95 85

105

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Lys Val Asn Thr Asp Gly Tyr Lys Arg

100

<212> PRT

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Ile Leu Ser Gln Val Thr Met Leu Ala Phe Gln Gly Asp Ala Leu Leu
              10
Glu Gln Ile Ser Val Ile Gly Gly Asn Leu Thr Gly Ile Phe Ile His
   20 25 30
Arg Val Thr Pro Gly Ser Ala Ala Asp Gln Met Ala Leu Arg Pro Gly
   35 40 45
Thr Gln Ile Val Met Val Asp Tyr Glu Ala Ser Glu Pro Leu Phe Lys
  50 55 60
Ala Val Leu Glu Asp Thr Thr Leu Glu Glu Ala Val Gly Leu Leu Arg
                 75 80
65 70
Arg Val Asp Gly Phe Cys Cys Leu Ser Val Lys Val Asn Thr Asp Gly
                  90
Tyr Lys Arg Leu
 100
<210> 13
<211> 90
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<400> 13
Thr Arg Val Arg Leu Val Gln Phe Gln Lys Asn Thr Asp Glu Pro Met
      5
                   10
Gly Ile Thr Leu Lys Met Asn Glu Leu Asn His Cys Ile Val Ala Arg
  20 25 30
Ile Met His Gly Gly Met Ile His Arg Gln Gly Thr Leu His Val Gly
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40

35

Asp Glu Ile Arg Glu Ile Asn Gly Ile Ser Val Ala Asn Gln Thr Val 50 55 60 Glu Gln Leu Gln Lys Met Leu Arg Glu Met Arg Gly Ser Ile Thr Phe 70 75 Lys Ile Val Pro Ser Tyr Arg Thr Gln Ser 85 90 <210> 14 <211> 88 <212> PRT <213> Artificial Sequence <220> <223> Synthetic peptide <400> 14 Leu Glu Gln Lys Ala Val Leu Glu Gln Val Gln Leu Asp Ser Pro Leu 1 5 10 15 Gly Leu Glu Ile His Thr Thr Ser Asn Cys Gln His Phe Val Ser Gln 20 25 30 Val Asp Thr Gln Val Pro Thr Asp Ser Arg Leu Gln Ile Gln Pro Gly 45 40 3.5 Asp Glu Val Val Gln Ile Asn Glu Gln Val Val Gly Trp Pro Arg 50 55 60 Lys Asn Met Val Arg Glu Leu Leu Arg Glu Pro Ala Gly Leu Ser Leu 65 70 75 Val Leu Lys Lys Ile Pro Ile Pro 85 <210> 15 <211> 92 <212> PRT <213> Artificial Sequence <223> Synthetic peptide <400> 15

Gln Arg Lys Leu Val Thr Val Glu Lys Gln Asp Asn Glu Thr Phe Gly

1 5 10 15

Phe Glu Ile Gln Ser Tyr Arg Pro Gln Asn Gln Asn Ala Cys Ser Ser 20 25 30

Glu Met Phe Thr Leu Ile Cys Lys Ile Gln Glu Asp Ser Pro Ala His
35 40 45

Cys Ala Gly Leu Gln Ala Gly Asp Val Leu Ala Asn Ile Asn Gly Val
50 60

Ser Thr Glu Gly Phe Thr Tyr Lys Gln Val Val Asp Leu Ile Arg Ser 70 75 80

Ser Gly Asn Leu Leu Thr Ile Glu Thr Leu Asn Gly \$85\$

<210> 16

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Arg Cys Leu Ile Gln Thr Lys Gly Gln Arg Ser Met Asp Gly Tyr Pro 1 5 10 15

Glu Gln Phe Cys Val Arg Ile Glu Lys Asn Pro Gly Leu Gly Phe Ser 20 25 30

Ile Ser Gly Gly Ile Ser Gly Gln Gly Asn Pro Phe Lys Pro Ser Asp 35 40 45

Lys Gly Ile Phe Val Thr Arg Val Gln Pro Asp Gly Pro Ala Ser Asn 50 55 60

Leu Leu Gln Pro Gly Asp Lys Ile Leu Gln Ala Asn Gly His Ser Phe 65 70 75 80

Val His Met Glu His Glu Lys Ala Val Leu Leu Lys Ser Phe Gln
85 90 95

Asn Thr Val Asp Leu Val Ile Gln Arg Glu Leu Thr Val
100 105

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<211> 97

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Pro Thr Ser Pro Glu Ile Gln Glu Leu Arg Gln Met Leu Gln Ala Pro 1 5 10 15

His Phe Lys Gly Ala Thr Ile Lys Arg His Glu Met Thr Gly Asp Ile
20 25 30

Leu Val Ala Arg Ile Ile His Gly Gly Leu Ala Glu Arg Ser Gly Leu 35 40 45

Leu Tyr Ala Gly Asp Lys Leu Val Glu Val Asn Gly Val Ser Val Glu 50 55 60

Gly Leu Asp Pro Glu Gln Val Ile His Ile Leu Ala Met Ser Arg Gly 65 70 75 80

Thr Ile Met Phe Lys Val Val Pro Val Ser Asp Pro Pro Val Asn Ser 85 90 95

Ser

<210> 18

<211> 141

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide

<400> 18

Pro Thr Ser Pro Glu Ile Gln Glu Leu Arg Gln Met Leu Gln Ala Pro 1 5 10 15

His Phe Lys Ala Leu Leu Ser Ala His Asp Thr Ile Ala Gln Lys Asp

20 25 30

Phe Glu Pro Leu Pro Pro Leu Pro Asp Asn Ile Pro Glu Ser Glu
35 40 45

Glu Ala Met Arg Ile Val Cys Leu Val Lys Asn Gln Gln Pro Leu Gly
50 55 60

Ala Thr Ile Lys Arg His Glu Met Thr Gly Asp Ile Leu Val Ala Arg 65 70 75 80

Ile Ile His Gly Gly Leu Ala Glu Arg Ser Gly Leu Leu Tyr Ala Gly \$85\$ 90 95

Asp Lys Leu Val Glu Val Asn Gly Val Ser Val Glu Gly Leu Asp Pro  $100 \,$ 

Glu Gln Val Ile His Ile Leu Ala Met Ser Arg Gly Thr Ile Met Phe \$115\$ \$120\$ \$125\$

Lys Val Val Pro Val Ser Asp Pro Pro Val Asn Ser Ser 130 135 140

<210> 19

<211> 101

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<400> 19

Ile Gln Val Asn Gly Thr Asp Ala Asp Tyr Glu Tyr Glu Glu Ile Thr 1  $\phantom{\bigg|}$  5  $\phantom{\bigg|}$  10  $\phantom{\bigg|}$  15

Leu Glu Arg Gly Asn Ser Gly Leu Gly Phe Ser Ile Ala Gly Gly Thr
20 25 30

Asp Asn Pro His Ile Gly Asp Asp Ser Ser Ile Phe Ile Thr Lys Ile 35 40 45

Ile Thr Gly Gly Ala Ala Ala Gln Asp Gly Arg Leu Arg Val Asn Asp 50 55 60

Cys Ile Leu Gln Val Asn Glu Val Asp Val Arg Asp Val Thr His Ser 65 70 75 80

Lys Ala Val Glu Ala Leu Lys Glu Ala Gly Ser Ile Val Arg Leu Tyr 85 90 95

Val Lys Arg Arg Asn 100

<210> 20

<211> 95

<212> PRT

<213> Artificial Sequence

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<400> 20

Ile Gl<br/>n Leu Ile Lys Gly Pro Lys Gly Leu Gly Phe Ser Ile Ala Gly<br/>  $\ensuremath{\mathsf{1}}$